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Effect of treatment on mononuclear cell migration in cervical cancer patients

Cristiana Bernadelli Garcia[1], Paulo Cesar Fernandes Jr[2], Douglas Côbo Micheli[1], Ana Helena Macedo Pereira[1], Eddie Fernando Candido Murta[2], and Beatriz Martins Tavares-Murta[1]

[1]Department of Biological Sciences, and [2]Discipline of Gynecology and Obstetrics/Research Institute of Oncology (IPON), Federal University of Triângulo Mineiro, Uberaba, MG, Brazil

ABSTRACT

Aims and background. Our aim was to evaluate the effect of treatment on the *in vitro* migration of circulating mononuclear cells in cervical cancer patients at different stages.

Methods. We prospectively investigated 24 patients with cervical neoplasia, without prior treatment, submitted to surgery or chemotherapy as therapeutic conduct. Controls were healthy volunteer women (n = 23). Mononuclear cells were isolated from peripheral venous blood before and after treatment, and their migration capacity was evaluated in a microchemotaxis chamber assay towards the chemotactic stimuli fMLP, MCP-1 and RANTES, compared to basal migration. Serum levels of nitric oxide metabolites were assayed by the Griess reaction.

Results. Increased mononuclear cell migration in response to the chemotactic stimuli, compared to basal migration, was observed in controls and patients, without differences between them. After treatment (n = 14), mononuclear cell migration in response to MCP-1 and RANTES was increased compared to pre-treatment. Serum levels of nitric oxide metabolites were more elevated in patients (n = 19) than in controls (n = 17), but decreased after treatment (n = 15).

Conclusions. The results suggest that the production of soluble circulating factors by tumor cells could interfere with the functional activity of blood mononuclear cells.

Key words: *cervical cancer, mononuclear cell migration, nitric oxide, treatment.*

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Correspondence to: Prof Beatriz Martins Tavares Murta, Department of Biological Sciences, Federal University of Triângulo Mineiro, Praça Manoel Terra, 330, CEP 38015-050, Uberaba-MG, Brazil.
Tel (55)-34-3318-5467/5488;
fax (55)-34-3318-5462;
e-mail bmurtafarmaco@dcb.uftm.edu.br

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